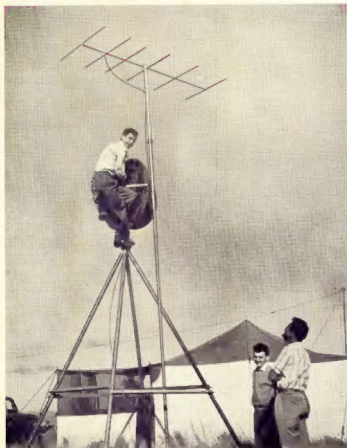


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EDITORIAL



AMATEUR RADIO PROGRESS

LOOKING back over twenty-five,
fifty years, of communication by
radio or "wireless" waves, someone
has always written about "progress"
and reviewed "modern techniques"
as used "today" compared with
"yesterday".

Since the early Amateurs pioneer-
ed the short wave bands and first
demonstrated to the world that in-
ternational communication by such
means was possible, the Amateur
Service has been in the forefront
of these progress reports.

From the early layout and the triode
valve; from the metal chassis and
crystal oscillator to the all-band
beam pentode final, v.f.o. controlled,
the Amateur has demonstrated his
ability with modern techniques.

Ten years ago—well ahead of the
field of commercial communication
equipment—the Amateur commenced
interesting himself in suppressed
carrier transmission (s.s.b., A3a).
Today—so many years after—the
commercial field is looking to s.s.b.
to help solve its problem in finding
sufficient room in the overcrowded
bands for the mushroom growth of
communication services required
under 1981 standards.

Because of overcrowding in the
Amateur bands, the bulk of Amate-
urs today are leaning more towards
this form of transmission—a system
generally recognised as being pro-
foundly more suitable for long dis-
tance work, greater "talk power"

and a "system benefit" of about 9
db. in comparison with conventional
amplitude modulation.

Apart from the power gain, s.s.b.
allows many more stations to op-
erate without mutual interference in a
given band of frequencies, minimises
heterodyne interference, and makes
it easier to operate with full voice
break-in (VOX) systems. Like all
other advances in the field of trans-
mission, s.s.b. has its protagonists
and its antagonists. Nevertheless,
every Amateur who has studied the
problems besetting the world in
maintaining a semblance of order in
the use of the bands for the count-
less services currently operating in
this age, will quickly appreciate that,
as far as the Amateur Service is
concerned, s.s.b. is the answer to the
congestion in our severely restricted
frequency bands as compared to the
pre-war years.

Don't forget, our numbers have
tripled on a world-wide basis as
compared with pre-war years, but
our frequency allocations have
shrunk. We are therefore destined
to remain in the forefront of "pro-
gress reports" and utilise to the full
the latest modes of transmission.
Certainly we can't all do it, but we
can, within reasonable limits, keep
up with those who pioneered the
way for us. S.s.b. is the immediate
answer to ours and the commercial
problem, a fact which we forecast
to be proved true in the next few
years.

FEDERAL EXECUTIVE.

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MT110

A FREQUENCY METER

BY AN AVID "A.R." READER

THIS article has been written mainly for the newcomer to the Amateur bands and who is perhaps wondering how the problem has been attempted by someone else. I would first like to thank the Amateurs who may recognize something of their own and to whom I am in debt to for their many suggestions and help.

The frequency meter described is a reasonably simple unit, but depending on the reader's need, it could fulfil the basic part of a more complex instrument.

A good vernier dial is an essential. There are two types available from disposals stores and both are excellent. The dial I use is a 6 inch calibrated 0-100 main scale with a small vernier knob reading 1/20th of each division. The other dial is a thumb-moved vernier with which it is possible to read 2,500 divisions. While this dial may be more difficult to mount, it may be easy to obtain from a disposals tuning unit.

The case is a new steel type 8" x 13" x 7" with louvred sides, a removable front, and finished in grey hammertone.

A small chassis was firmly mounted to the front panel with metal end brackets. The main tuning condenser was mounted above the chassis and coupled to the dial with two flexible couplings. The dial was also screwed to the panel and with a little care an excellent drive is achieved.

The variable oscillator tunes from 3.360 to 3.710 Mc. This will give adequate bandspread on 28 Mc., but in building another meter, I would arrange it to tune a slow as 3.2 Mc. so as to give a further check of calibration with WWV on 10 Mc.

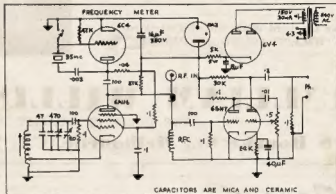
The ceramic variable trimmer condenser is mounted underneath and to the front panel. The horizontally mounted coil is also underneath the chassis and is a ribbed ceramic former type. A check through the junk box may locate a large diameter

(1" to 2") coil which is already wound. As the values of the various tuning capacitors can be altered, it is well worth experimenting with any available coil.

In my case, the 3.5 Mc. coil from an AT5 v.i.o., modified to 14 turns (cotton covered about 18 or 20 gauge wire) and tapped at 5 turns from the earth end. The main tuning condenser is a ceramic mounted single gang broadcast type with only three moving plates left. This is also from an AT5. In various experiments with different coils and

The oscillator valve is mounted upright beside the gang in a ceramic socket. All components were mounted for minimum wiring which was done with heavy insulated copper wire, laced where necessary.

A 6C4 valve is used as a 3.5 Mc. crystal marker. A miniature disposals crystal was used and the grid of the tube switched to earth when the oscillator is not in use. A 1 Mc. crystal may be used but there are less confusing harmonics with a 3.5 Mc. fundamental.



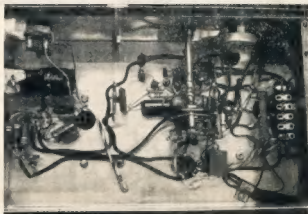
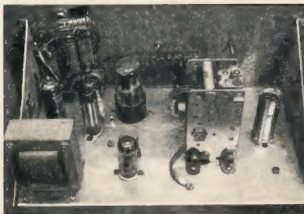
condensers, it was found difficult to arrive at the right bandspread and tuning required. For this reason a slug tuning coil was used—the slug being locked into place with paint when the unit was calibrated.

The frequency coverage is extended below the 3.5 Mc. Amateur band as it was found that with the non-linear condenser used, better bandspread was obtained as the condenser came out of mesh. The slug was therefore adjusted to bring the 3.5 Mc. position at approximately 20 degrees.

The output is to a pair of phones from the 6SN7 or 12AU7. One triode serves as a mixer and the other one as a resistance coupled amplifier. This is fitted with a gain control and was found to be quite useful when the instrument is used to monitor transmissions.

A conventional 150v. power supply and OA2 voltage regulator are mounted on the chassis—the opposite end to the oscillator components. When the unit is assembled, the power transformer is

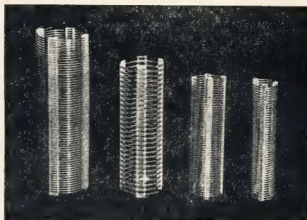
(Continued on Page 13)



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2-08	$\frac{1}{8}$ "	8 3"	No. 3006	6/3
2-16	$\frac{1}{16}$ "	16 3"	No. 3007	6/3
3-08	$\frac{3}{16}$ "	8 3"	No. 3010	7/4
3-16	$\frac{3}{16}$ "	16 3"	No. 3011	7/4
4-08	$\frac{1}{2}$ "	8 3"	No. 3014	8/5
4-16	$\frac{1}{2}$ "	16 3"	No. 3015	8/5
5-08	$\frac{5}{16}$ "	8 3"	No. 3018	10/6
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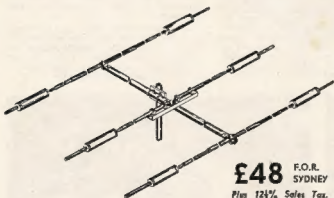
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SIDE BAND FROM THE START

BY "VOX"

WHY S.S.B. AT ALL?

EVERYONE using the Amateur bands these days is conscious of an intruder breathing down his neck. Some regard it with suspicion, some with a sensation akin to fear, while some merely see in it the pattern of the future. This intruder, of course, is sideband transmission—to some the symbol of the sect that cry "Abolish the Carrier," and to others little more than another objectionable form of QRM.

Face the facts! They are there for everyone to see and understand, and we will try to sort them out and present them in a palatable way, mostly with the newcomer in mind.

First of all, we boldly project the neck into the cruel world and state that sideband is eventually going to sweep other methods of phone transmission off the bands—and good luck to it. Secondly, we state categorically that nothing but good can come of this eventual result, so you had all better get well-informed on sideband matters right away. At present the ill-informed (and uninformed) are a pretty strong body, and their objections to s.s.b. transmission are mostly based on ignorance or misunderstanding.

● In view of the correspondence in "A.R." the following article is printed. It provides another viewpoint from overseas and may assist readers.—Ed.

HOW A.M. WORKS

Strangely, but truly, there is nearly as much misapprehension about the way amplitude modulation works as there is about s.s.b.! One still meets many people who honestly do think that the carrier-wave of an a.m. transmission is constantly bobbing up and down in amplitude, in sympathy with the waveform of the audio supplied from the modulator. And they quote the classic "envelope" diagrams to prove their point. The fact is, of course, that if you looked at the central region of an a.m. transmission with a scope and a sufficiently selective receiver, you would soon prove to yourself that nothing of the kind is happening. The function of the audio, as applied to the p.a. through the modulator, is to beat with the carrier frequency and therefore to produce side frequencies (or sidebands) on either side of it.

Modulate a 150 watt carrier with 75 watts of pure tone. Put the carrier on 3800 Kc. and modulate it with a pure tone of 1 Kc. Everything being technically perfect, the result of this would be that you are transmitting three separate signals—the original carrier, with its amplitude unchanged, on 3800; and smaller signals, also pure c.w., on 3801 and 3799 Kc. The original carrier is not bobbing up and down in amplitude at a frequency of 1 Kc., so get rid of that misapprehension once and for all. But one of the functions of your receiver is to combine these three signals (or, at any rate, two of them) so that

the beat between them produces the desired 1 Kc. tone in the headphones. The waveform after the detector will look like the classic "envelope" picture—but that is not at all what the carrier-wave itself looks like.

Having cleared this one, we can see that the only function served by the carrier-wave is to provide a signal that will beat with the "intelligence" (in this case our 1 Kc. tone) and make it possible for the receiver to re-create (resolve, detect or demodulate) that intelligence. The carrier-wave, therefore, does not "carry" anything; that term is a relic from the old days when no one understood very clearly what it was all about.

ECONOMY MEASURES

We are beginning to arrive at the fact that the carrier is an unnecessary encumbrance and an awful waste of power. Further proof? Read on.

Suppose, in the example we have just taken, that the only intelligence it was desired to transmit was this 1 Kc. note. In order to transmit it we have used a conventional a.m. transmitter and a conventional receiver, and there it is, reproduced just as sent. Now, any c.w. man could have told us that we were wasting time and power. You can transmit that vital 1 Kc. note merely by using an unmodulated transmitter putting out a continuous signal on 3800 Kc., provided that you use a b.f.o. at the receiving end. Set the b.f.o. precisely 1 Kc. off the receiver's i.f., tune in the signal accurately and there is your "intelligence." Instead of transmitting a so-called "carrier" and two sidebands, we have just transmitted a single signal (which we will no longer call a "carrier" since it manifestly has nothing to carry).

The important point to note in this little example is that the full power

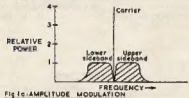


Fig. 1a: AMPLITUDE MODULATION

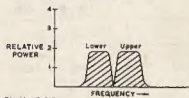


Fig. 1b: O.S.B.

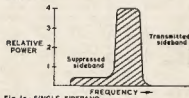


Fig. 1c: SINGLE SIDEBAND

Note: All diagrams drawn to same scale.

Comparing a.m., d.s.b. (carrier suppressed), and s.s.b. under relative power conditions. From the transmitter end, about 8 db. more talk-power is obtained with s.s.b. than from a.m. when similarly rated transmitters are used. As explained in the text, s.s.b. has many other advantages as well.

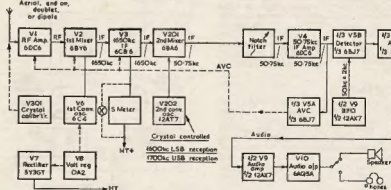


Fig. 1—Block schematic showing general arrangement of the SX-111 Receiver, which is a double-conversion superhet., with a crystal-controlled second oscillator giving a final i.f. of 50.75 Kc. With a first i.f. of 1650 Kc., and selectable oscillators of 1650 Kc. (i.s.b.) and 1700 Kc. (u.s.b.), the 50.75 Kc. resultant is fed through a notch filter which moves the notch (maximum attenuation point) through the i.f. selectivity curve; this enables maximum suppression of an interfering heterodyne to be obtained with minimum distortion of the desired signal; the notch filter has a range of 4 Kc. across the i.f. selectivity curve. The crystal pull-inmer enables the points to be obtained on the band-edges and at each 100 Kc. mark on the tuning scale; a small variable capacity adjusts the first oscillator frequency for exact scale reading. When listening to a.m. phone, either sideband can be selected, which considerably improves the apparent selectivity. The electrical design of the receiver, and the variables under panel control, make it particularly effective for c.w. working.

of the transmitter is now devoted to transmitting the actual **intelligence** to the receiver. The next step is purely one of imagination. Regard that transmission as if it were not an ordinary c.w. signal with the key held down, but the output of an s.s.b. transmitter modulated by a 1 Kc. tone. (There is no difference, of course. The output of such a transmitter, running at 3500 Kc. and modulated by 1 Kc., and transmitting the lower sideband only, would be identical with a c.w. signal on 3799 Kc.)

Your receiver, by use of the b.f.o., converts this single sideband into an audio signal identical with the modulation being applied to the s.s.b. transmitter. What was previously achieved by a "carrier-wave" and two sidebands has now been achieved by one single sideband, into which all the transmitted power can be steered.

In case there are those who still can't see that an s.s.b. signal from a transmitter modulated by pure tone is purely and simply a c.w. signal, let it be pointed out that many sideband operators produce c.w. by keying an audio oscillator fed into their modulator, and not by inserting a carrier and then keying the p.a. or an earlier stage.

This makes it easy to take in the next step. Instead of feeding this oscillator into the modulator of the s.s.b. transmitter, feed voice frequencies from a microphone and speech amplifier. The sideband will now become a complex group of sidebands, their frequencies differing from that of the non-existent carrier by the instantaneous speech frequencies being transmitted. Deal with this suitably at the receiving end (by supplying a "carrier" by b.f.o. or other means) and you will have your intelligence fully and faithfully reproduced.

In short—why use a large portion of your 150 watts in generating a "carrier-wave" that doesn't really carry anything, when the same object can be achieved at the receiver end with a very few milliwatts, or even microwatts?

If you are radiating 100 watts (which you should do with a 150 watt transmitter), which is better—to spend 66 watts on a carrier-wave and to split the remaining 34 watts between two sidebands, or to get virtually the whole 100 watts into one sideband? (The purists could pick holes in these actual figures, but this is addressed mostly to the novice and we want to keep it simple.)

ADVANTAGES

We are not going into circuitry in this first instalment. Sufficient to say that means are available whereby the carrier and one sideband are almost completely removed from the scene, and all the available power radiated in one sideband. The circuitry is not simple, but is logical, reliable and understandable by anyone who wishes to grasp it.

Right—you are now transmitting your intelligence with 100 watts behind it instead of 25 or less. Result, 6 db. gain at the receiving end. To this you can add roughly another 3 db. for the receiver itself, since it can be operated at half the bandwidth required for taking in both sidebands, as in the case of an a.m. signal. Advantage number one,

then—9 db. gain over an a.m. transmission. (This one produces interminable arguments, which we will deal with later—if we have to!)

Next, consider the modulation equipment in an a.m. transmitter. The anode voltage of the p.a. must be doubled on modulation peaks, if you are modulating it 100%. All components (including, of course, the p.a. valve) must be chosen with this requirement in view. Modulation transformers are expensive, heavy and space-wasting. Power-packs are notorious hog of power, transformer and rectifier efficiency being what they are.

Much of the most bulky and wasteful part of an a.m. transmitter can be dispensed with when we change to s.s.b. Modulation is carried out at a low level. Power requirements are modest, since there is no datum line on which severe peaks are superimposed (the "datum line" in this case is zero). The valves and power-pack are only being pushed during actual peaks of speech transmission. Advantage number two, then—considerable economy in valves, components and space. (For a given input the power-pack for a sideband transmitter will probably be less than half the size of that required for a.m. equipment.)

NO PHASE DISTORTION

One of the irritations of a.m. phone working (particularly on DX) is phase distortion, or selective fading, which can render a transmission almost un-

! The 3 db. bandwidth advantage is very debatable.—Ed. "A.R."

intelligible under certain circumstances. These effects usually occur after dark, but can also happen over "awkward" skip distances at almost any time. They are due simply to the fact that every a.m. transmission consists of three separate signals—the carrier and the two groups of sidebands—all of which have to be received as sent out. If the carrier happens to arrive by more than one path (which often happens) the two received components may be shifting relative phase and may easily cancel out at a given instant. This leaves the sidebands to fend for themselves at times, while at many other times the carrier is down in amplitude, which produces the effect of over-modulation. The net result is severe distortion.

No such effect with our s.s.b. transmission! At times when a.m. phone is almost impossible to copy at all, you will hear s.s.b., over a similar path, crisp and clear with even the fading hardly noticeable. Advantage number three—and a worthwhile one for phone operators busy on the DX bands.

T.V.I.?

T.v.i. troubles are minimised when a well-designed s.s.b. transmitter is used—not so much because of the mode of transmission as because of the actual design of the transmitter. A hard-driven Class C stage is the prime source of t.v.i. owing to its inherent tendency to spit powerful harmonics in all directions. Likewise, the chain of frequency multipliers so often used to drive it might almost be specially designed to produce harmonics—in fact, it ~~is~~ for that's its job.

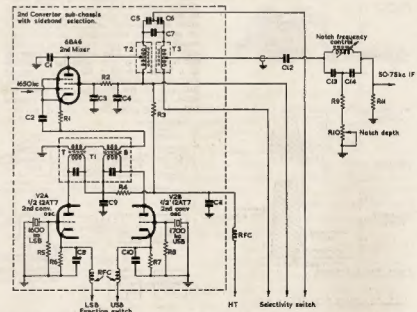


Fig. 2.—Detailed circuit arrangement around the second mixer and s.s.b./a.b. crystal-controlled oscillators in the Hallicrafters SX-111—and see Fig. 1. All values are given below, but it should be noted that T1, T2, T3 are factory-made items. The selectivity positions are 0.5, 1, 2, 3 and 5 Kc., the 2 or 3 Kc. settings being most suitable for a.s.b. reception.

- | | | |
|-------------------------------|----------------------------------|------------------------------------|
| C1—100 pF. | C13, C14—0.0075 μ F. | R10—8,000 ohms. |
| C2, C3, C4, C11—0.02 μ F. | R1—1 megohm. | R11—1 megohm. |
| C5, C8—200 pF. | R2—120,000 ohms. | T1—1.5-1.7 Mc. transformer. |
| C7—2.2 pF. | R3—22,000 ohms. | T2, T3—50-75 Kc. I.F. transformer. |
| C9, C10—0.01 μ F. | R4, R5, R6, R7, R8—100,000 ohms. | X1—1000 Kc. crystal. |
| C12—100 pF. | R9—2,200 ohms. | X2—1700 Kc. crystal. |

The sideband transmitter uses neither frequency multipliers nor Class C stages, since linearity is the prime requirement throughout. The v.f.o. is made to beat with fixed-frequency oscillators in order to give the final output per frequency; and the final stages are usually linear Class B or AB2. From personal experience, the writer has found that a 150 watt sideband rig, working on c.w., produces no interference on a t.v. set which is normally almost bound to bits by a well-known commercial a.m. transmitter with a high reputation for immunity from t.v. And this in a fringe area with a pretty weak signal on Channel 1.

Any t.v.i. caused by a sideband rig is usually due to front-end saturation of the t.v. receiver, since the peak power radiated by the transmitter can be very high and can cause instantaneous "splashes" of great amplitude. This type of t.v.i. can only be treated by fitting a high-pass filter to the t.v. set and, if necessary, screening the i.f. But it is far less difficult to deal with than the business of a harmonic on 42 Mc. which gets into the set along with the t.v. signal and cannot be separated out. Advantage number four—a reasonable chance of far less t.v.i. trouble.

peaks will beat the receiver's a.v.c. to it and will hit the thing at full gain. There's no carrier there to take hold of the a.v.c. voltage!

When you hear what is apparently splatter from a nearby sideband signal, turn down the r.f. gain, increase the selectivity, and nine times out of ten you will find that it isn't there at all.

Incidentally, the sideband operator has to become accustomed to this technique of listening—r.f. gain well back, plenty of selectivity and no a.v.c., and, of course, the b.f.o. on. Now, the interesting thing is that he will usually leave the receiver in this condition when listening to a.m. phone (yes—some s.s.b. men still do listen to a.m.), and he finds readability improved in consequence! Furthermore, the effects of phone distortion can almost be removed by this means—leave the b.f.o. on, tune to zero-beat with the phone station's carrier, and listen on one sideband (which you can do on most modern receivers). If you have never tried this, a surprise awaits you.

So the sideband transmission must cause less interference, simply because you can park ten or more of them alongside each other and there will be no whistles between the lot of them.

ators on the band are not slow to tell them so! On the very morning of writing this we listened to an HB9 patiently explaining to a UP2 that he must turn his audio gain down—and down—and still more down. The UP2 was left with an almost perfect transmission—and one of far greater readability than he achieved by trying to screw things up too far. This, up to now, is a splendid characteristic of the sideband fraternity—they do tend to be perfectionists and they will not tolerate nasty transmissions in their midst.

DISADVANTAGES

We have to be fair, of course, and we are prepared to fall over backwards to find and state the disadvantages of s.s.b. as a mode of operation. (Though they may be classified as disadvantages, there will be many who won't agree that they are anything of the sort.)

The first is the relative complexity of the gear, as far as circuitry goes. The removal of the carrier and the unwanted sideband involves very good filtering, unless you use the phasing method, which also has its difficulties.

Transmitter stability must be good—not necessarily better than that of a really good a.m. or c.w. transmitter, but certainly better than the average. The power supplies must be "hard" as regards regulation and stability.

At the receiving end the technique may be a little difficult at first; and if you haven't a really good receiver, then you will have to build or buy one, or carry out fairly extensive mods on the one you've got.

In short, to be a successful sideband operator one can probably say with fairness that your standard of technical know-how has got to be somewhat higher than the average.

We quote these as disadvantages, but surely this is nonsense—aren't they really advantages? To have stability and good regulation forced upon you—well, you should really have had them all the time, whatever mode you have been using! At the receiving end, if it takes s.s.b. to show you that your receiver wasn't all that hot—surely that is something to be grateful for? And to be forced to read up the subject may bring you in contact with some fundamental truths that you were not sufficiently familiar with in the first place.

And now we present a puzzle: Several DX enthusiasts have asked, from time to time, how it is that DX sideband stations seem to put in an even stronger signal than c.w. stations from the same part of the world, although they are certainly not using more power, and probably less. The only answer we can think of (and we hope it is the right one) is that the average sideband man will take a little more trouble over his whole station, and will probably have a properly-loaded transmitter, a properly-matched aerial system, and so on. [Underlining ours.—Ed. "A.R."]

Many of the keen c.w. men of many years ago can now be found on the s.s.b. sections of the bands, and they are the ones whose signals are out-pointing the newer c.w. stations—and some of the established phone-only

(Continued on Page 13)

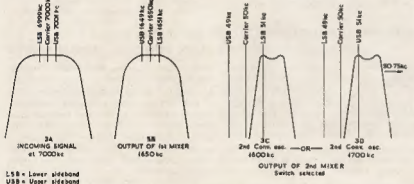


Fig. 3.—Derivation of the upper (or lower) sideband in the SX-111, with a signal incoming at 7000 Kc. taken as the example. This diagram should be read with Figs. 1 and 2, Figs. 3C and 3D above corresponding to V1A and V1B in Fig. 2.

ON THE BANDS

Now we come to the raging controversy of whether sideband signals cause less interference in the Amateur bands than a.m. transmissions. Well, there's not the least doubt about it, really. Of course, they cause less QRM—if they are signals from well-designed and well-adjusted rigs. But bad s.s.b. signals can cause just as much damage as bad a.m. signals, and it is not fair to compare a bad s.s.b. with a good a.m. transmission. We have the impression that there are fewer bad s.s.b. transmissions around than the many faulty a.m. efforts one hears, but never mind that one for the moment.

The main trouble, we are convinced, is lack of know-how at the receiving end. Many operators will always listen to a.m. phone with the front end of the receiver wide open, so as to make maximum use of the a.v.c., and with the selectivity control also as flat as possible for intelligibility. Under these conditions, a sideband signal on a closely-adjacent channel may well cause "splatter" of some sort, since its high

When two a.m. phones overlap each other, you have to copy one of them through the steady heterodyne and the monkey-chatter. With sideband you have only the monkey-chatter to contend with, and it's pretty easy to sort out intelligible speech from monkey-chatter—the human ear is highly adaptable to this sort of thing.

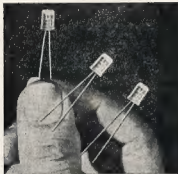
If you still need convincing, listen to the sideband stations between 14300 and 14350 Kc. at a busy time of day; spend twenty minutes or half an hour with them. Then move down the band and sort out the phone in the "squeaks-and-whistles" region, and see how you like it. We will say no more—try it yourself.

New sideband operators, particularly if they have built their own gear, will sometimes start up with a bad transmission due to excessive audio, insufficient carrier suppression and also poor suppression of the unwanted sideband. Under these conditions, their transmission will leave something to be desired, and can cause some interference to adjacent channels. The habitual oper-



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NATIONAL FIELD DAYS CAN BE ... FUN!!

FOLLOWING the good time had by all during the 1960 N.F.D., members of the Elizabeth Amateur Radio Club decided to enter again this year. We had many discussions on who, what, and where—these being held at the residence of our illustrious President, "Tubby" Vale, VK5NO.

The chaps all met at 0900 hours on a fine Saturday morning—Feb. 11—their cars loaded with rigs, bodies, chairs, spades, tents, wire, and all the necessary bits and pieces to make a Field Day. The convoy then set off for Black Top Hill (the name of which we found out afterwards!) We had obtained prior permission to use the site, providing we took adequate fire precautions—this we did by having five knapsack sprays on loan from our local E.F.S., and a special instruction to the President not to light his "straw burner" unless it rained! The site was well covered in long, dry grass.

Upon arrival we set up our three tents about 200 yards apart and under the shade of some trees. Last year we had only one tree stump within miles and no sky hooks for our antennae, so this year we made sure we picked a site with plenty of Mother Nature's masterpieces around. Having pitched the tents, Tubby and some helpers ran out the power leads, whilst the operators put up their antennae. There were, fortunately, no incidents during this procedure and soon the rigs were being assembled in their respective "shacks".

The first tent contained the 40 and 15 metre rig, loaned by Cyril 5DY (who was unfortunately away this weekend). It used a single 68 foot dipole and was operated by Ben 5BP and Pete 5HB (good c.w. chaps!) with occasional assistance from Ian 5QX.

The second tent contained the 80 and 20 metre rig (from 5FY with Clive 5PE's modulator). This rig used a double dipole (80 and 20 metres). The operators of this rig were 5FY and Jeff 5NQ with assistance from Don 5TM. (Did you notice, chaps, four good c.w. men as operators!!)

The third tent, known affectionately as the "palace", contained the v.h.f. rigs, one on 6 metres with a 4 element beam (from 5ZJM), and one on 1 metre with a 48 element stacked array. Ken 5ZCH was in charge of his own rig there, with plenty of assistants. The brew making equipment was also in the "Palace".

During the preparations, Tony Strong, one of our most ardent listener members, arrived in his car towing a large shrouded object—"The Donk". Where he managed to lay his hands on this beautiful 2 kva. machine we didn't enquire, it was there, every rusty piece "glistening" in the sunshine!

By noon the two h.f. rigs were rarin' to go, so with due ceremony the President, accompanied by rousing cheers, started her up—lo and behold she worked, and we had power (all 205 volts of it!) Tubby, his face wreathed

in smiles, was beside himself (that looks like two 5PS Warricks, side by side, if you can imagine it!) with joy. Away went the operators and the air was full of QSOs. Tubby, meanwhile, by means known only to himself and the donk, managed to squeeze 240 volts into the cables (providing the tea jug was off!). The v.h.f. tent was now in business, and you can imagine what they heard—now!

After lunch, the rigs were thoroughly checked out and a few QSOs made—yes, even a v.h.f. voice was heard from Adelaide, some 15 miles away.

All the tents were well equipped; tables (?), chairs, rigs, knapsack sprays, operators and oodles of pesty flies!



The Elizabeth Radio Club's 80 and 20 metre tent at Black Top Hill (S.A.) during the 1961 National Field Day

Our 'Onorable President—the Tub—was general factotum, tea brewer, engine topper-upper, etc. A very good job he did, too, ably assisted by Peter Field, Tony Strong, Brian Chelard, Trevor Mell, Kevin Wweeney and John Messner—all up and coming members of the Ham fraternity. Tubby's speciality, of course, is his open wire, centre fed type, incinerator, which soon after Tubby had entered any tent caused all the flies to surrender without a struggle and made the c.w. men go on phone—by George, it's potent!

The Contest duly opened at 1730 hours (S.A.S.T.) and naturally the 40 metre rig was really going strong. 80 metres was pretty dead until a couple of hours later, when it too came good. The v.h.f. department was very slack, where do all the v.h.f. chaps get to on Saturday nights?

Naturally our contest expert—the President—was rushing from tent to tent, muttering queer numbers to himself and puffing away at his D.D.T. machine. Occasionally he would make a QSO and a couple of points, and then off to the next base, leaving a cloud of smoke behind him that would make a Naval destroyer blush with envy!

The site must have looked peculiar to any passers-by that night, a generator at the side of the road seemingly supplying a solitary 25 watt lamp on an overhanging branch. A further look would disclose a conical yellow shape (the 40 metre boys), a green rectangle (80 metres), and, of course, the v.h.f. "Palace" was illuminated like a fun fair.

By the end of the first section, everyone was satisfied that a useful score had been made, and were looking forward to the 'morrow.

Ben 5BP and a few of the younger members camped overnight to look after the gear.

The Sunday section went well, and quite a number of local mobiles appeared—Ian 5QX, John 5ZJM, Clive 5PE and, of course, our well known Federal representative, Les 5AX, from Gawler. Other visitors who looked in were Hugo 5ZDA, Dave 5DS and Pop 5LD. It appeared that no matter which band the locals tuned into, 5LZ/Portable was there.

At the end of the Contest we had made a better score than last year when we operated under 5DY/P call.

In general, the Contest went well with more portable activity than last year. Many chaps didn't know the Contest was on—where, oh, where was the Contest publicity in "A.R."?? We, like many others, had to assume that the rules were the same as last year, and were very disappointed that "A.R." made only the briefest of mentions about the forthcoming National Field Day. (So was "A.R."—Ed.)

V.h.f. activity wasn't anything to rave about, some fifteen contacts only being made on 6 metres. (There must be more than fifteen v.h.f. stations in Adelaide!) One metre gave us a few contacts, so they all helped to swell the score.

We all had fun, and no accidents, or even humorous incidents, which is good for morale, but poor for news items.

See you next February, chaps, on the usual bands.

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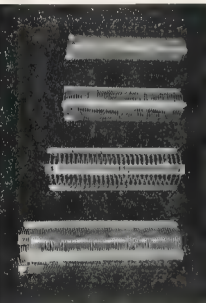
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0	2	4	6	8	10	12	14	16	18	20	22	24	45
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W. AUSTRALIA — W. EUROPE													
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7													7
W. AUSTRALIA — N.W. U.S.A.													
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7													7
W. AUSTRALIA — N.E. U.S.A.													
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7													7
W. AUSTRALIA — S. AFRICA													
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W. AUSTRALIA — FAR EAST													
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14													14
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Trade Review

'WILLIS' AIR WOUND INDUCTANCES

These inductances are wound on four polystyrene pieces, so making the coil rigid yet possessing low losses. They are available in ten diameters ranging from $\frac{1}{8}$ " to $1\frac{1}{2}$ ", with winding pitches of eight and sixteen turns per inch.

On an independent check on these coils, it was found that their Q factor was not less than 250, and this improved on the smaller coils at higher frequencies. They would be particularly useful in pi output networks or for general purpose coils, in v.f.o. or transmitter applications.



Bandpass units can be made by removing a few centre turns, as can link networks be formed by using a two-turn coupling link at the end. The whole coil system being rigidly held by the polystyrene coil bars.

They are moderately priced and make available to the Australian Amateurs means of constructing a professional-looking piece of gear.

A quality job to be fully recommended.

Our sample from William Willis & Co., 423 Bourke Street, Melbourne.

PLUGS

The same supplier has a most attractive range of two and three pin male and female shielded plugs, finished in polished chrome. They are small, attractive and functional, being well suited for audio or a.c. use. They would be particularly suitable for higher priced professional or commercial applications, yet they are not expensive. Further details are available from Magrath.

A. & R. VOLTAGE DOUBLER TRANSFORMERS

These units, ranging from 80 to 190 mA. types, use two silicon rectifiers (Mullard type OA210, or International type SD94) in conjunction with two 100 μ F. 200 v. electrolytic condensers in a voltage doubler circuit. This provides a lower cost power supply than the conventional full wave gas filled rectifier type of supply. In addition, the voltage regulation is superior.

At zero load the voltage doubler has an output of 340 volts, yet at 190 mA. load the voltage has dropped only to 320 volts. Thus they are particularly suitable for Class B stages.

The unit tested was the type 2066 (320 volts output when loaded to 190 mA.). It was subjected to a 100% overload, i.e. 380 mA., for thirty minutes, at an ambient temperature of 100°F. and whilst becoming hot, it did not show any signs of distress. The maximum temperature rise is 45°C., fully loaded.

Due to the strong a.c. flux field surrounding the core, they must be kept away from other chokes or items affected by hum fields. In particular, they must not be mounted adjacent to tank condensers in transmitters. Otherwise they will produce an f.m. component in the output, due to their strong flux field.

Each transformer is accompanied with a circuit diagram, clearly showing the colour coding of the leads. The electrolytic condensers used in the voltage doubling circuit are special types and any recognised makes can be used.

These transformers are very well made units, with sturdy mechanical and electrical construction, both capable of withstanding much abuse.

Further details are available from A. & R. Electronic Equipment Co. Pty. Ltd., 378 St. Kilda Rd., Melbourne, and supplies are available from recognised supply houses.

TAPE DECKS

A special offer of Collaro tape decks is being made from Ham Radio Suppliers, Hawthorn, and further details can be obtained from their February advertisement on the inside front cover. Tests with one of these decks showed that they fulfill the maker's claim and as they have provision for adding an additional head to the deck, they can be made into a most versatile unit. They are possibly the best available tape deck today, and would only be surpassed by other units costing at least ten times as much. A most useful item which will amply repay the time taken to build up the associated circuitry, which then provides a complete and adequate tape recorder.

DYNAMIC MICROPHONE

Warburton Franki (359 Lonsdale St., Melbourne) have a very nice miniature dynamic mike that would be ideal for a mobile rig. The unit is about the size of a small egg and the price is very low. These units are just becoming available and from an inspection could well prove a very welcome addition to the Amateur shack. Drop a line to W.F. for further details.

KNOBS

If you require a professional finish to your new rig then the new knob handled by J. H. Magrath, 208 Little Lonsdale St., is for you. This moulded knob of black bakelite is 1-5/16" overall dia. with an aluminium inner ring, which gives the whole unit the appearance of something from W. land. A moulded brass inserted into the knob has two grub screws which positively lock onto the shaft.

This is an attractive, functional and well constructed knob, and would be one of the best yet seen on the Australian market. Write to Magrath's for further details, mentioning you saw it described in "A.R."

MINIATURE MULTIMETERS

These miniature meters feature five d.c. and a.c. voltage scales at 3K ohms/volt, with three d.c. current ranges and one ohms range. They are very well made, with a very good meter movement which is critically damped so that it rapidly approaches the reading then stops without overshooting. The meter is



very useful as a modulation meter which will read the average applied a.c., in addition they are very compact and robust so can be used in mobile or field day stations.

Supplies are available from Ham Radio Suppliers, 5a Melville St., Hawthorn, Vic.

AFDR1 RECEIVER

"A.R." has been privileged to review the AFDR1 Receiver. This is a completely new concept in Amateur-type communication receivers. It is fully transistorised and operates from four heavy-duty 1.5 volt batteries.

The first r.f. stage is aperiodic tuned and covers from 500 Kc. to 80 Mc., this in turn then feeds into the first mixer which is xtal controlled from the oscillator. In turn this feeds into a counter which registers the frequency on a decade scaler, calibrated in cycles per second. Provision is made to feed the xtal oscillator into a second mixer for comparison with the in-built 1 Mc. standard, or WWV. By this means the readout frequency is accurate to better than one cycle per megacycle, e.g. the maximum error at 60 Mc. is not greater than 60 c.p.s., by correcting the local xtal oscillators this error can be further reduced.

This receiver has no dial, the received frequency being directly read from the front panel decade scaler. Thus you can set your receiver exactly on a specified frequency, or conversely state the exact drift of the receiving station. This front-end uses fifty transistors, all in the frequency counting circuitry.

Two i.f. channels are used in parallel; one broad-band, having a bandwidth of 3 Kc. at -3 db. and a response at -60 db. of 7 Kc. This is

(Continued on Page 12)

Kc. or 2 Mc. can be used, depending upon the xtal chosen. Front panel controls are bandchange, selectivity, broad tuning, a.m./c.w./u.s.b./l.s.b. and d.s.b., audio bandwidth, audio gain, a.v.c., and xtal standardisation.

Various accessories are available which include a pan adapter, timer, diversity plug, cathode followers, a universal power supply for use on 12 volts d.c. to 230v. a.c./d.c. with all intermediate voltages covered, a precision xtal calibrator which provides a frequency reference from WWV with the same accuracy as the latter, i.e. one part in ten million. This unit uses a one inch c.r.o. tube and compares the one second tick in a synchroscope circuit with a derived 100 c.p.s. pulse from the receiver's multivibrator. Thus after a 100 second comparison, the in-built 1 Mc. xtal can be compared exactly with WWV.

The basic receiver weighs fifteen pounds, and occupies 1½ cubic feet, the front panel being 18" long, with 12" depth and 12" high. The main space being taken by the decade counter frequency globes which replace the conventional dial.

This receiver is out of this world and the local agents are to be congratulated upon importing such a unit. The price is most attractive, initial shipments being quoted at £99/10/1, plus 25% sales tax.

★ OUR COVER PICTURE

The VK3ADW/P group on Mount Blackwood. Michael VK3ZEO secures the six element two metre beam to the Trig. Point. Michael VK3ZCZ and Keith VK3YQ offer advice.

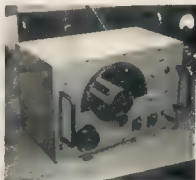
A FREQUENCY METER

(Continued from Page 3)

close to the louvred side of the case for maximum ventilation.

All leads, plugs and controls are on the front panel which is screwed to the metal case with a number of self-tapping screws. Fitted with handles and a bezel light, it is quite an attractive addition to the bench and very pleasing to the eye of certain gentlemen.

A Bendix frequency meter was used for calibration and in most cases another Amateur would be only too willing to help you out in this matter.



Where a meter is designed for large frequency coverage, calibration points are usually printed in a small book. In this case where the range is only 4/10ths of a megacycle, and taking the readings at 3.501 and the next at 3.502, the number is only 200.

Thus the dial reading can be typed against the frequency, on a single sheet of paper, taking four columns.

The crystal check point can be suitably marked and the sheet framed liked a picture.

Frequencies are very easily read and working other than 3.5 Mc., a simple multiplication is all that is needed.

AUSTRALIAN RADIO AMATEUR CALL BOOK

1961-62 EDITION

The new edition of the Call Book will shortly be compiled and printed. In order that it may be as accurate as possible, every Australian Amateur is requested to immediately complete page 153 of the present Call Book and send a copy to "A.R." and the P.M.G.'s. Department in the Licensee's State.

PLEASE DO THIS NOW SO THAT YOUR LISTING IN THE NEW CALL BOOK WILL BE CORRECT

The Publications Committee also invites suggestions for improving the new edition of the Call Book. Write: Editor "A.R.", P.O. Box 36, East Melbourne, C.2, Vic.

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PHUTILE PHONETICS—Failing Fatuous Fone

By L. H. THOMAS, G6QB—DX Editor, "Short Wave Magazine"

THIS may be regarded as an Impassioned Plea or an Angry Tirade—whichever you like. But the writer has become so exasperated with some of the gibberish heard on the Amateur phone bands that he has to let the steam off before it starts coming out of his ears.

When will some of our phone operators learn sense? There seems to be a certain proportion of them who think it clever to surround their conversation with unnecessary verbiage and extraneous nonsense by using so-called "phonetics" in the most unnecessary circumstances.

We have always winced and gone slightly green at "Q R Mary," whoever she might be, but now it's "Q R Morocco" or even "Queen Roger Madagascarr," and if anyone can see the necessity for spouting that lot on an overcrowded band, then we are extra dim. "QRX" is fine for the c.w. operator; as it stands, it's tolerable for the phone man; but "jamming" or "interference" would be better. (Yes, yes, we know . . . you use the Q Code because it's international and overcomes the language difficulty. That's why two Q's working each other talk about "Queen Roger Morocco"! For goodness' sake let us grow up and talk an intelligible language—and down the drain with all Q-signals rolled off to sound clever. Don't try to tell us that "Your sigs are fading" is not more intelligible, even to a Uruguayan or a Latvian, than "You have some Queen Sugar Baltimore on you".

"I SPELL"

A recurring nightmare is to work a station whom you have already given Readability 5, Strength 9, who then tells you his name is Nebuchadnezzar (which you naturally get first time—otherwise he wouldn't be 5 and 9, would he?) and then adds the dread words "I Spell". You know what's coming; even if it were "N...e...b...u...d...z...e...z...a...r" and so on it would be bearable, but it has to be "N for Norway, E for England, B for Boston" and right through the ghastly lot, followed, no doubt, by "I repeat". To those persistently driven up the wall by this kind of nonsense, we say, "Hit back! Invent your own alphabet, and let 'em have it."

We tried it once, with devastating results. As far as we remember, the reply went "The name is Freddy—I spell—F for Fear, R for Rear, E for Ear, D for Dear, D for Dear, Y for Year." Invent a better name than that, though, so that you can introduce "Q for Queer, C for Clear, L for Leer, M for Mere, N for Near" and many others. You can, with luck, deal with your own call sign in the same way and become Gear Three Peer Dear Queer—or something near. Almost as good for exploration is the Eog family, enabling you to become Gog Three Tog Dog Wog, or thereabouts.

FOREIGN PARTS

The really shocking thing is the use of place names, of all things, for phonetics. No wonder the newly interested S.W.'s. and the eavesdropping B.C.'s. think they have wonderful receivers . . . they hear Mexico, Germany and Canada all at once! Believe it or not, but we actually did hear a G station a few weeks ago declaiming thus: "CQ, CQ, CQ, this is Germany . . ." Cut him off there and there's only one interpretation. Of course it wasn't Germany at all, but only old G3 so-and-no; but of all the words to choose for "G" we can hardly think of one less suitable.

So we must tell all the listeners that when they hear Canada Ontario they are listening to Cuba; that Denmark London means Germany; that Yokohama Ontario is really in Roumania; and so on ad nauseam. Could it be more confusing and unnecessary?

Listening round the s.s.b. section of 20 one night we heard a weak station who was probably a good DX place. But every time he signed he used long-winded phonetics and spoke so quickly that it was literally impossible to get his prefix. We finally switched off and never did gather who that man was. If he had spoken his call sign, as it appears on his license, just once, we should have got it. This is what we mean by the real futility of the so-called phonetics.

BE FASHIONABLE

Enough of destructive criticism! We offer a new phonetic alphabet which will put you right in the swim, among the Top People. Use only this one (it washes whiter than all the others) and you will stand right out on the band as something different (a moron, probably). But that's the thing—**Be Different**. Be a Beatnik if you like, but use our phonetics.

A for Able
B for Babel
C for Cable
D for Dear
E for Ear
F for Fable
G for Gable
H for Hear
I for Ipecacuanha ("I Spell")
J for Jeer
K for Khatchaturian
L for Label
M for Mabel
N for Near
O for Oesophagus ("I Spell")
P for Peer
Q for Queer
R for Rear
S for Sable
T for Table
U for Unintelligibility
V for Veer
W for Weir
X for Xylophone
Y for Year
Zee for Zed.

Good luck to you all and may you dodge the Queer Rear Near, nor ever suffer from Queer Sable Babel. (I will even send you my Queer Sable Label. The name, of course, is Mabel Able Cable and the QTH Llanfairpwllgwyllgogochwyrndrobwillantysilogogogoch...! spell! (No, you definitely don't—Ed.)

Up the wall, everybody!

— . . . —

SIDEBAND FROM THE START

(Continued from Page 1)

s.s.b. types, too. This is not a general rule, of course, and there are plenty of weak sideband signals to be heard when their c.w. counterparts are coming in more strongly. However, it's more often the other way round.

SUMMARY

Summing up the contents of this little lecture, then, we had better state briefly the advantages and disadvantages of an s.s.b. conversion at your station. In its favour are the following factors:

- (a) Up to 9 db. gain over a.m.—say two S points—with same power;
- (b) Equipment is less bulky and uses less mains power;
- (c) No phase-distortion or selective fading;
- (d) Less t.v.i. trouble;
- (e) Abolition of carrier-wave heterodyne interference.

Against it, if you like to consider these points as disadvantages:

- (1) Increased complexity and expense of gear;
- (2) Increased difficulty of operation, in the early stages;
- (3) Necessity for better receivers;
- (4) Rather more technical know-how necessary, or desirable.

Sort these points out for yourself and decide whether the whole business is a fad or a reality; and then, whatever your own decision, ask yourself whether you really believe that sideband is going to advance or retreat. There's not much doubt about the answer to that one. Sideband is a mode we are all going to have to live with, and those that get in early are going to be those who have most of the fun. Make up your mind whether your motto is going to be "Help Stamp Out Carriers."

(To be continued)

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" 66 MD	£9/3/0
" 67 MA	£11/3/6
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SIDE BAND

Bud Pounsett, VK2AQJ
23 Seiffert Centre,
Queensbeyan, N.S.W.

NATIONAL FIELD DAY

Although I was unable to spend much time in the contest and worked but eight portable stations in about 45 minutes, it was very pleasing to find that not once was I answered with that familiar reply of previous years, "Sorry, OM, I can't receive a.s. with this receiver." Now about some portable band stations in next year's contest, chaps? It is certainly worth some thought.

THE FINAL POWER SUPPLY

From the January issue of the "Sidebander," the magazine of the Single Sideband Amateur Radio Association, comes some interesting information you may wish to apply to your final amplifier power supply. This is the conclusion to a series of articles on linear amplifiers written by John Kenly, W2EOR.

"The linear presents problems that are peculiar to its breed and power supplies must be designed to provide adequate regulated voltages to handle the difficult load requirements. The load current swings from a low level to some higher level at a syllable rate. During this swing, the plate voltage must stay close to its value at the low current level if the amplifier is to be linear. For this reason, power supplies that are 'stiff' or have good dynamic regulation, should be used in linear service.

"One of the easiest ways to secure a 'stiff' supply is to use a swinging choke input with the largest output capacitor (in microfarads) that you can find and economically utilize. At voltage levels up to 2,000 volts, electrolytic capacitors in a series parallel arrangement, such shunted by a 100K ohm, 1 watt resistor to prevent the possibility of an unequal voltage distribution across the filter string, will be an economical source of filtering. Another important feature of a 'stiff' supply is the bleeder resistor which will load the circuit keeping the no-load voltage from rising to a high level which would drop when a sudden load was applied. This fluctuation expressed in percentage form is the regulation of the power supply.

"Regulation in percent equals $(E \text{ out No Load minus } E \text{ out Full Load})$ divided by $E \text{ out Full Load}$ multiplied by 100.

"A good stiff supply has better than 10 per cent regulation or, in other words, less than a 10 per cent change in voltage between no load to full load current.

"The high current bleeder must not be needed in a linear amplifier for it is possible to use the idling current through the tube to provide the necessary no load current on the supply. A protective bleeder which will draw at least ten ma. should be included for safety even though the final idling current is used in place of the bleeder.

"The current rating of the power transformer used for a linear need not be capable of handling the peak current drawn by the amplifier if a large capacitor is used at the output of the filter. A rating of one-quarter of the peak current will be in most cases sufficient if the output capacitor of your filter is large enough to solve the following equation:

" C (mfd.) equals $489,000$ divided by Z_{pp} and W_{pp} equals Z_{pp} E (power supply voltage) divided by 100 (percent regulation). The peak plate current is the calculated peak current, not the top of your plate meter swing. The output capability of the power transformer may be calculated using this general formula at any voltage as long as the peak current is known. This is a simplified rule of thumb formula, but will hold for most commercial transformers presently on the market.

"In view of the fact that the tube becomes very practical at all levels. Smaller rectifiers such as the 6H6 or similar mercury vapor tubes can be used successfully in these bridge circuits by reducing the size of the unit's power supply components to a desk top kilowatt rig is realized.

For those of you who may not know of the S.S.B.A.R.A. it is an Association with headquarters in New York and members all over the world. If you would like a sample copy of the "Sidebander," let me know and I will

be pleased to send one along. The S.S.B.A.R.A. is an organization of licensed Amateurs dedicated to furthering a.s.b.

RESEA

In the Jan. issue, mention was made of the ARSSA and ARSSA sideband generators available from Don Habericht, VKHRS, of Albany. This month we have the circuit which Don suggests could follow the ARSSA unit which has low level output on 40 to 10 metres.

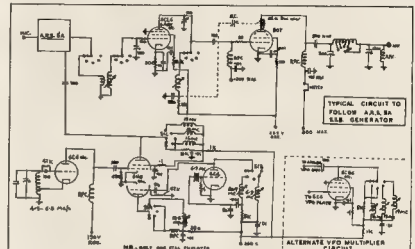
The way in which output is obtained on the various bands is rather ingenious and will be of interest to all users of 9 Mc. sideband generators. As will be seen from the circuit, the 6U8 tube is used as an untuned buffer between the v.f.o. and the ARSSA mixer (a 6EB6) on 30 and 30 metres, but on 40, 15 and 16 metres, the 6U8 is a mixer. The 6.9 Mc. crystal oscillator signal beats against the v.f.o. signal to produce the required injection frequency at the ARSSA. This dodges the rather undesirable practice of doubling and tripling the frequency of the v.f.o.

For 30 and 30 metre operation a 9 Mc. v.tal oscillator signal is heterodyned against the 5.3 Mc. a.s. signal and for 40 metres the second harmonic of a 6.9 Mc. v.tal oscillator is used. This latter mixing occurs in a separate chassis to the exciter, the exciter having low impedance output at 5.3 Mc.

S.B. S.W.I.

Again from Atton, L2136/VK4, of Atherton, North Queensland, comes a report on some interesting sideband stations heard in Feb. Atton used a quad to catch these goodies, but it is in the process of erecting a Mosley T43 beam. Here are some of the more interesting calls taken from a very imposing list.

EP4X, FLA, FLZEA, FLTET, LUTEC, QD6CW, SV14A, UALBA, UAPU, USRP7, UAPU, WSAAC/Aero Mobile, Z87P9—these were on 20 metres, and for 15 metres Atton heard UALAB, WAZEV, ZL4AB. Seems as though North Queensland is a good place for Hams to migrate to. Watch out for local QRM, Atton.



This practice has caused many a sidebander considerable trouble trying to eliminate drift, especially on 40 metres where the v.f.o. frequency is usually tripled. This system of Don's eliminates the problem. Using only one crystal makes it very attractive. A word of warning, put the 6.9 Mc. oscillator in a shielded compartment, it has a fundamental and some overtones very close to the lower band edges. The 6EB6 stage is an alternate v.f.o. multiplier, but I prefer the v.f.o./v.tal oscillator combination for stability.

VKEAQJ

Here at Queensbeyan, work is progressing on the new transmitter. The exciter section is completed and has been in use for some weeks. I was lucky enough to have a mechanical filter sent to me by K7LBS and this has been put to good use. The general design is very straight forward and attention has been paid to good layout with plenty of shielding.

The crystal oscillator uses a 12AU7 followed by a T800 balanced modulator tube. The T800 tube does everything that B.C.A. tubes do. Carrier suppression is very good and easy to adjust. An EP86 and 12AT7 take care of the audio requirements when the v.f.o. multiplier circuit is used. Following the mechanical filter is a 6BA6 amplifier at 455 Kc. which was included to provide automatic load control (a.l.c.) at a later date. A 12AT7 is used as a balanced mixer to convert the 455 Kc. s.s. signal to approximately 5.3 Mc. by beating against the signal from the 6BA6 tube.

The v.f.o. I.C. circuit is removed from the exciter chassis by about 6 feet of twin coaxial cable to give adequate stability. It was found desirable to tune the plate circuit of the balanced mixer from the front panel as the use of a reasonably high Q circuit here restricted the bandwidth somewhat. Output from the exciter tended to drop off if a shift of 100 Kc. or so was made. High Q is desirable here—the unwanted frequencies being close to the wanted 5.3 Mc.

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Ger. Cn't	No. rises	Call	No. rises
VK2U	3 251	VK3CW	4 202
VK3KX	4 243	VK4B	5 192
VK3AB	4 243	VK3BZ	3 170
VK4P	21 221	VK3BG	30 171
VK3WL	14 211	VK4BV	18 116
VK3ATN	22 204	VK3EK	15 103

C.W.

Ger. Cn't	No. rises	Call	No. rises
VK3KX	10 287	VK4B	5 215
VK3CX	28 275	VK3XU	48 213
VK4P	29 254	VK3LE	17 212
VK3KX	18 236	VK4BV	18 210
VK3P	15 226	VK3YL	38 203
VK3BZ	6 222	VK3RX	23 195

Amendment:
VK3ARX 86 137

OPEN

Ger. Cn't	No. rises	Call	No. rises
VK3CX	6 288	VK3BZ	4 231
VK4P	28 287	VK3BG	4 220
VK4B	8 285	VK3WL	45 225
VK3KX	74 247	VK3LE	23 223
VK3KX	7 238	VK3U	23 221
VK4B	7 235	VK3KX	13 218

New Member:
VK3NMQ 81 102

Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

BOSS HULL MEMORIAL V.H.F. CONTEST

Editor "A.R." Dear Sir,

In the rules for the 1980/81 Ross Hull Memorial V.h.f. Contest, the reason for holding such an event was given as "to perpetuate the memory of the late Ross Hull whose interest in v.h.f. did much to advance the art." Is it logical therefore to suppose that Ross Hull would desire the major VK v.h.f. contest to assist in further advancement, the art of communication at v.h.f.? I think it is. Do the present rules allow for this? I think not.

Under the existing rules, activity is increased but what is produced? Tired operators and very little else. Surely the contest should encourage the opening of new paths, the use of more bands and the working over longer distances. Very little advance has been made in this direction over the last three years on the two most densely populated v.h.f. bands.

In encouraging this "right" sort of activity I feel it should be done in a manner that allows a contestant who picks his operating time intelligently to compete on an equal basis with the more fortunate types who can spend unlimited hours on the air.

These are unrealistic ideals you see. Perhaps, but I feel we can approach more closely to these ideals by a change of rules. However, I am not going to discuss the details. I will consider some pertinent facts. Are 80 Mc. and 144 Mc. so different as some say as far as propagation is concerned? I think not. In fact, I think the longer the wavelength the harder it is to make the contact. Only one mode of propagation devices and that is the ordinary ground wave. At 80 Mc. and below 80 Mc., it allows stations about 800 miles apart to work quite easily but with the ease decreasing as the distance figure increases. At the 800 mile mark, the direction of the ground wave is 7.5 scatter and F layer refraction occurs occasionally on 80 Mc. and rarely, if ever, on 144 Mc. The ground wave can cover a 3,000-mile range to be covered but such contacts are not usually easy. Thus, the ground wave is not a very desirable mode and path distance is applicable to these modes.

Another consideration is the state of affairs brought about by current techniques. It is possible because of practicable antenna sizes and tubes available, to work somewhat greater distances with comparable ease on 144 Mc than on other v.h.f. bands within the range 100-150 Mc. This is mainly because the above factors can be allowed for by using a scoring system based on distance of contact path rather than on the arbitrary boundary (call area) system prevailing. Such a system is possibly the most practicable and hence the desirable one for the present state of the art. This opinion is most strongly held by v.h.f. contesters.

I suggest a scoring table as follows:--

Feinta per Contact

Distance Between Stations	1 mile	2 miles	3 miles	4 miles	5 miles
Over 1 and up to 10 miles	0	0	0	0	1
" 10 " 25 "	0	0	0	1	3
" 25 " 50 "	1	0	1	5	8
" 50 " 100 "	2	1	3	10	15
" 100 " 200 "	5	2	3	15	20
" 200 " 300 "	10	5	8	30	40
" 300 " 500 "	3	8	15	40	50
" 500 " 1000 "	1	15	40	50	60
" 1000 " 5000 "	5	40	50	60	70
Greater than 5000 "	10	40	50	60	70

* Points to be set down by F.C.C. when contacts over these distances are made.

A possible point for criticism may arise from the Contest Committee's chore of having to check logs. The job would be made easier by making it necessary for stations to exchange figures involved in the contest as well as the usual cyphers to make valid contacts. The figures so exchanged would not have to be exact as the proposed table deals in quanta of miles.

A point mentioned earlier concerns the duration of the contest. I suggest that contestants be allowed to choose their own operating period of say, one week, within the months Jan. and Feb. This allows the time-pressed operator to pick the time best suited to himself and of course those who spend long hours on the band could submit their best week of

If the table were to be used, only two transmitting sections would be necessary—open and phone only. C.w. only is not justified yet as there are no exclusive c.w. operators on v.h.f.

Finally, since I propose that bands above 300 Mc. be definitely included in the contest, I feel the name should be changed to the Ross Hull Memorial V.h.f./U.h.f. Contest.

Have "A.R." readers any comments for or against the foregoing? You may have different ideas on the figures set out in the proposed table. If the Federal Contest Committee is given sufficient time, maybe we will get new rules for the next contest. Sending ideas along in October or November helps nobody.

—David Rankin, VK2QV.

SCHEMATIC HANDBOOK

Editor "A.R." Dear Sir,

After reading the "Surplus Schematic Handbook" by "CQ," I would like to offer a suggestion, for what it is worth. Would it not be possible to have a similar publication featuring disposals equipment of Australian origin?

Quite a large number of sets such as AR7, AR8, No. 11, No. 122, etc., just to mention a few, have found their way through disposals to the Amateur fraternity at large.

The first thing that one does normally, after obtaining a piece of disposals equipment, is to try to obtain a schematic circuit of the set. This is not always easy, even for the more common pieces of equipment.

In my humble opinion you would be doing
Hams generally quite a service with such a
publication. If this would not be possible,
surely it would be feasible to print regularly
in "Amateur Radio" copies of the circuits of
equipment of Australian origin.

Well now that I have had my say, what do others think about it?

—Lionel L. Sharp, VK4NS.

MORSE CODE

As many letters have already been published on this subject, the Publications Committee is of the opinion that enough has been written to indicate the Amateurs' feelings on this matter, therefore correspondence is now closed. Acknowledgment is made of the receipt of

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letters, in reply to VK3HG, from: J. C. Redman, VK2JE, Frank Hine, VK3QL; George Downing, VK3GD; S. J. Lloyd, VK3AST; Fred Jenkins, VK3WS; A. C. Rechner, VK3ZCR/T; Bob Elms, VK3BE; and D. Grantley, LA32A/3-2000.

U.S.S.R. CONTEST

To mark the occasion of Radio Day the U.S.S.R. Federation of Radio Sports is sponsoring on 30th April, 1961, the traditional competitions of short wave wireless operators.

AEDILI RECEIVER

Supplies are available through April Fool Day Enterprises, local agents for Lunar Manufacturing Company, Mars. Special discounts are available for collecting these units direct from the makers.

TECHNICAL ARTICLES

Readers are requested to submit articles for publication in "A.R.," in particular constructional articles, photographs of stations and gear, together with articles suitable for beginners, are required.

Manuscripts should preferably be typewritten but if handwritten please double space the writing. Drawings will be done by "A.R." staff provided that the article is illustrated.

Photographs will be returned if the sender's name and address is shown on the back of each photograph submitted.

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David Tanner, VK3AAU
C/o. British Nylon Spinners,
Rayswater, Victoria.

cently in the improve on the quiet period after the JAs have started to re- gang may find some new them going. There has also batch of full tickets, yours we may possibly see some have received news of the v channels. As I have it, 1 and 2 metres unaltered, 6-5 Mc. and Channel 5 in and a new one—SA, 137-14 able to confirm these from gear. This will probably give a bit of a lift and give the to build gear which they dly later. By the way, my WJAAU, as you might and the h.f. bands collecting dope SAU

NEW SOUTH WALES

and Tv Group have been with attendances at meetings still quite encouraging. The members attending is expected to be maintained in the years to come. The permanent committees have started their lectures directed at basic and transmitter theory. The h.f. interest is quite strong. It has been provided in included form. We have had several information to be made available. The basic theory of the country members. This suggested by the management. Although it has several hitches which someone needs to bear, it can be delivered as a folder to be added to all making things into my own. The Group policy, I believe, is to publish any articles between v.h.f. men all over comments from other V.h.f. could be welcome. "A.R." to publish any articles for

g event is the Autumn Field
on Sunday, 16th April. This
be non-competitive and will
get-together via 2 mnx with
of active v.h.f. operators in
one. The Sydney gang will
points in the highlands of
and further details will be
A. Broadcasts before the day.

our regular operators on this
EABR, report all activity
or openings already reported

new stations have appeared, making for contacts on 147 Mc. There has been considerable announcements of t.v. channels in the existing 144 Mc. information given earlier. I hoped that something concrete would be announced soon.

right hidden tx hunt, with the fox, was won by Paul 12NM second and no third spot only three miles from bounds well and truly lost, they were only 100 yards

we are able to report signals on the band, though only in the 12-12.4 MHz range. The 12.4-12.6 MHz band, which the IAR hopes to have pleasure in using as the final 2.4 MHz band, is being done by a group of luck and I hope the rumour that this band has always been in VK2. These two enthusiasts are expected to start Amateur TV.

XX was the recent contact
at Valley Heights to ZHO
AH at Lane Cove.—EZAG.

VICTORIA

meeting was held on Feb. 10 with some 12 members present. A brief talk on his DX-VEK. Discussion took place

On the various aspects of QSLing with article to appear soon in "A-R."

After general business, David SQV gave an excellent discourse on computers-electronics. All present were suitably awed by the details involved and everybody appeared to have good grasp of the subject, possibly that counted for the lack of embarrassing questions that might have been asked later. The David

50 Me.—Two openings during the month saved the hand from oblivion for those looking for DX. Feb. 2, at noon, VK4 and again the evening with VK4, 2 and 5. Then as on 18th Feb. we had VK4 in for quite a time during the day from 11 a.m. until 3 p.m.

The Field Day saw quite a few stations in the field. Those worked were 2ADW at Mt. Blackwood in Baerhus Marsh, full top brass, 3CS/P. Woody Hill, in Donnybrook, 23OKT You Yangs, 3ZS/P. Bam Hill, Loch, had more success here than at Koroit burns, 3ABC/P. Wantima, 3CF/P. Croys had no luck on Sunday at Arthur's 5 1A1Z/P. Mt. Ridley, were all active during the day.

144 Mts.—Two mx Field Day portable stations were located: 3ABC/P, Wintamina; 3ADW/P, Blackwood; 3CS/P, Woody Hill; 3ZCG/P, Hill; 3ZDE/P, Mt. Dandenong; 3ZGG/P, Donna Buang; 3ZHT/P, Mt. McDonnell; 3ABK/P, in Geelong; 3APC/P, Crib Point; 3ZEP/P, King Lake; 3ZIW/P, Mt. Dandenong. These were cancelled by 30V.

1988 Mr. Activity has jumped on this b
amongst the non-stabilized gang. 1A3C
Preston is active using 719s p.p. RL15 s
and 11 sl. yagi, and is usually active later
from 7.30 p.m. onwards on mx and 11 sl
contact. 123C at Easendon has worked
and 3ZGP is getting started slowly after
vamping some old gear. Have 905 super, 7
p.p and a rather inefficient 8 sl. yagi and
e. phased array ready to try out. 3AUX
Elderswick has had two-way on 385 v
1A3G with quite good results.

IZEN is re-building and there are other things on the way or contemplating building. IZEN Promises to be quite interesting a time on this year. Can't say what the stabilised is doing but know that SAUX has won across to 3ABK. 3AAK is without a beam. His mast is horizontal instead of vertical. He has worked quite a few of the others. IZ news when we know what is going on. —

FIFTH SYMPOSIUM

60 Mc.—Quite a decline in 39 Mc. DX been noticed over the last month, there is only an occasional VK4 or VK3 opening the whole period. JAs have been non-existent and nothing at all has been heard from Local activity, however, has been maintained at a reasonable level, particularly on Fox H and Scramble nights. Crossband working becoming more popular again and Rick 52 and John 52DZ have been working during 50 to 570 Mc.

Les 52A0 is a recent new station on 50 and a welcome is extended to you, Les. Sev VKs who may now have worked into V to complete their 50 Mc. W.A.E., may apply for the certificate. The address is: Mr. A. L. Stok, W.L.A. Awards Manager, 1 Macfarlane St., Brunswick, N.J. Extra stickers also available for extra countries worked.

The V.H.L. Group monthly Fox Hunt held on the 18th, with Neil SZAW as 6 1 mx fox, and Col SRO as 2 mx fox. K SMT was first home on 3, followed by 1 mx fox, and 1 mx entry, but Ian SZDM and John SZDX. The second was quite a long one and Gary SZFM, first John SZCJ and YL. Christine did make the last event due to the excellent v of the city lights obtainable at the finish. event number 3 John is, I believe, re-focused on last month's computer set up. The mobile equipment to prevent further trouble from short circuits.

Mobile activity should receive a boost when one of our most active 6 mhz station Garry 3ZFM, is heard in his new car. Gill 5GX has not been heard mobile for a while.

due to work involved in changing QTH. A new location has some elevation, so Gifford's signal from the base station should be a bit stronger over Adelaide. John SZBA is coming up with a new mobile tx, running high power and should be heard more regularly soon. A few of our mobiles participated in the National Field Day and had many contacts. Gary SZFM was portable at Mt. Lofty, M. SZCH/SZLZ was portable at One Tree Hill. Neil SZAW was mobile in the suburbs and your scribe portable at Ashton.

Propagation conditions are improving on mx, Hughie SBC having been heard and worked by Bob 5ZFG and possibly some of the other VKs too. No sign of Stuart 5ZDG from Wirrala yet. Mick 5ZOR has said his

visit to urge him to stake up the gear. W
about it "Stu"?
3BC and EAW have also been heard work
each other and stations in VK3.—5BQ.

WESTERN AUSTRALIA

Apologies for no v.h.f. notes for some months now, however what with making arrangements for his wedding and then the honeymoon, I now married life, 6BE has not found time to write them.

38 Me.—Activity during the past months has varied. The openings to the east have not been as numerous as in previous years. Whilst the stations from VK3, 3, 4, 5 and 6 were heard and worked quite often, it is regrettable that once the Ross Hull Concluded Eastern States contacts seemed to cease. However the band was open several times and we were able to hear VK4s working V and 3e, both sides of the contact being copied. This would be off the side of those beams, we were unable to make ourselves heard.

[illegible]

Activity on 288 and 978 has been quite noticeable and several stations have conducted very interesting checks. Stan 6ZAS, Keweenaw, and Jack 8BU intend going down south at Easter to conduct checks on 80, 144, and 288 Mc. Good luck, chaps.

The West Australian Vhf Group state took part in the National Field Day and have submitted a very nice log. All bands from 3.5 to 144 Mc worked. More of this is when we write an article on the subject. Item of great interest is the fact that Bessie watched a full programme of i.v. Channel 8 which was being transmitted from South Australia Bessie lives in Albany.—EZ

Figure 5 **Taxonomic composition**

1984 Year's Awardee Johnson Memorial Cup for intrasite operating was very successful, there being a marked increase in activity over last year's contest. Portable/mobile stations over this period were TZAX, TZL, TZAX and TZAQ. Bands in use were 2, 15, 17 and 23 MHz. Longest distance worked was from TZL portable at Mt. Wellington to TLY Laurens (100 miles) on 144 Mc. It is expected to Alan TMY will finish up on top. Four stations participated.

The February meeting of the V.h.f. Group consisted of a visit to a local transmitting station and was very well attended. A Hunt is planned for April 18 as part of the Institute fund-raising programme. Although both 3.5 and 144 Mc. will be used, we hope that as many as possible will make use of the v.h.f. band and prove its worth.

50 Mc.—Jack 7JB is constructing 80
receiving gear by the use of which we will
to have a h.f. group now included in the
17th broadcast. This group is the 17th
story in the north to be kept in touch
what's happening down south. Things have
been rather quiet DX-wise, but we were
completely left out Feb. 1 and 3 brought
good openings to VK3, 4 and 5; the 17th &
18th being the only other openings. Rat
pachy on 17th, but came good the follow-
ing day with VK3 and 4. A foreign i.m. stat
on 17th, 18th & 19th. A 1400 on 48 Mc.
Amateur clearly heard how many

Locally, quite alive. Michael TZAV heard for a week or so, but is heard now only when Channel 6 is off the air. Has t.v.i. in week signal area.

144 Mc.—This band is at last showing promise. On 25th, Barney TZAK heard a caribou believed to be Col TIZ in Launceston. This is the first time for quite a while that a caribou from the north have been heard in Hobbsville. No contact was made but it should only be a matter of time. TZAV in New Norfolk gear operating and is building a 10 element Yagi. TMY provides a good signal there over 35 miles of "difficult" terrain.

although TMY is building crystal control gear for both these bands.—T.E.O.

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15 Summit Avenue,
Earlwood, N.S.W.
Phone. UW 4348.

In compiling the notes this month I have had to depend, mainly, on information sent in by other Amateurs and S.W.'s, as I have not been so active for a few weeks. Due to circumstances beyond my control I can't see how I will be able to find time to be very active on the DX bands during the rest of this year. Any items of DX news, band conditions, etc., you may have would be appreciated, so please send them along each month.

Most reports say the bands were not as good as they were this time last year, but on looking through the lists a lot of good DX has been worked and heard. The trend of activity seems to be moving toward the lower frequencies. Good reports of contacts on 180 mhz have been received from those countries who are permitted to use this band. This is an indication of what is happening as we move away from the big gunship demand and it now seems certain that the 80 and 40 metre bands will be much more in demand over the next few years.

Kure Island—about 200 miles north of Midway Island—has come into the DX picture over the past few weeks. KHSEK has been active from that spot on a couple of occasions for the past few days. The excitement over these transmissions is the possibility of Kure becoming a new DXCC country. If you have missed out on these transmissions so far, all is not lost, for there is a strong possibility that a permanent station on the island is in the future. The new call sign will probably be KHSEK. These DX-peditions used a.s.b. and c.w. on 7, 14, 21 and 28 Mc. It is understood that a permanent station would run about the same power.

QSLs for the KNECD contacts should go to KNEBL (Ted Woods, Navy 3080, Box 18, F.P.O., San Francisco, California).

Tanna Tuva. Recent operation from this locality by UASRYA and UASFR/O on a.s.b. had the first time this mode of transmission. Tuva has been used from this spot. Although Tanna Tuva has been removed from the official DXCC country list, the Zone 33 makes it a very good one for W.A.Z. Reports indicate that this a.s.b. station will next appear at UMSFZ. The most used frequencies are within 10 Kc. of 14900 Kc. Listen for them between 1100 and 1300.

Rui CR10A, the only Amateur operator in very rare Portuguese Timor, has been inactive for many years. Rui has been away from Timor, on leave, but will return this month and there is a possibility of him coming on the air again soon. If he goes back to his old job in Dili, he will be using a low powered battery rig, since no a.c. is available. However, he will have a prospective new job in the transmitting station on his airfield at Baucau, he will have a 220v. a.c. power source available, as well as a variety of rhombics and large antenna masts.

Chuck VK8TB is planning a trip to Timor in the near future. There is a licensing snag, however, as all foreigners are unable to get a license. If you are a resident this ban does not seem to apply. Chuck thinks there is a good chance of him getting permission to operate CR16AA's station. So there seems to be a glimmer of hope for many of us to get a chance of adding CR16 to our DXCC list.

Steve VK3VK, of Tweed Heads, is now VK-0VK at Wilkes Base in Antarctica. (2ARX)

A well known DX'er, Fred Lutz (DM8RM), would like a young VK lad or girl age 15 or 16 years, whose Dad is a VK, to write to his daughter. His daughter is learning English and letters from Australia would help her in these lessons. Address in the first instance, write to Fred at Altenburger Strasse 21, Schmollin (Rix Leisig), German Democratic Republic.

Danny Well, in his attempt to circumnavigate the world, has possibly come to a full stop. After a series of heartbreaking events, the Yasmie III, with Danny and his wife, Naomi aboard, was towed into San Diego Harbour (California).

A good (heavy) pat on the back for a couple of VK's who sat in the middle of the 7 Mc zero time—GMT.

e.w. band on phone working each other while
the band was wide open to U.S.A. in the
A.R.R.L. Contest.

NAURU.—A Victorian Ham who is a doctor has gone to Nauru and the boys are hopeful that he will get on the air soon. Rumour has it the home call is VK3JMK, but cannot verify as yet or ascertain the VK3 call sign. (3ARK)

Ron VK2ZHF is now on Lord Howe Island. He expects to be active on 30 Mc. very soon.

Signals from the U.S.S.R. are still coming through with good strength on 14 and 9 Mc. bands. The best times from my location in Sydney is 1100 to 1230x. Some of the rarer prefixes such as UG8, UMA, UJ8, UJ7, etc., are frequently heard.

ACTIVITIES

Laurie VK2AMR was active on two bands but found the DX scarce at the times available for operation. On 7 Mc. c.w. he worked KH5CD on Kure Island and KC0USH. Those worked on 14 Mc. c.w. were FB3CE, UB5KED, and UB5DV. Heard: FRTZD, FB8CQ, KP1AD, SV1AO, BV1USA, SASTO, MPMAM; phone heard: ZETJR, VK0BH, OAJX.

Frank VERQL had a number of QSOs on 2.5 Mc. c.w. and among others worked VERDK, JASLN, WSHOC, WJPP, heard ZBAJH, DL4DG, DLST, UB5EL. 7 Mc. c.w. worked: KP4CGA, GSVB, CNIBK. 14 Mc. c.w. worked: EPIAD, SJ1AD, heard: ZPSLS, MP4MAH, H52M. Best time for 7 Mc. DX was from 0830 to 0800z.

VE2ZE had only 12 QSOs for the month and included LA5DB, VK6VK, UA0TN, VU1EA, UA0KNC, KL7CUK, all on 7 Mc. c.w

Rick VK3BX stayed on 14 Mc. c.w. to work the following: CT1HX, PK3AN, ET2U/ET2LZ2FA, SM5VK/MQ5, UW3KCA, SV0WR, VP6LN, SASTA, 601MT, 9U3MC. He heard and called KW8AQ, 2PHLS, AC3PN, UA1KAE, UP3KA. Rick is building a fixed 5JK beam this month to see if they are as good as the one he had 25 years ago.

Hal WEAHMI says "conditions were very changeable. Sometimes good and sometimes bad. QRN was troublesome all the month." However, he ran up quite a good score. 16 Mc. c.w. worked: W/K. KH6. JA. DJNWA. DJ4AYI, DL8R. F8ZF. F8WK. F8ZF. G2BB. G3NAR. G8PP. HB8MU. F8XK. IZ2L. J26PO. KW6DF. LU2AZ. OKIADM. PY8XK. FYIAB. PY2VB. SP5ADZ. UA8EVA. UA8KOA. UA-

0KEA, UAGKQD, UASAF, UAIKAG, UASAF
UASUF, UBSKAB, UBSKEP, UBSJX, YVIAD
YVSB, YCSAM, YOTDL, 14 Mc. c.w. heard:
CTIDJ, DLIEE, EASBW, EQSX, ETIUS, G4OI

6ACJ, HCIL, HCGB, HMIL, HTFF, HZIF
 LUDAW LUPAF, LZKZ, SMWT, SZAF
 7ACJ, HZIF, HZIF, HZIF, HZIF, HZIF
 7KKB, URKAK, VENN, Y10, YVXAKA
 8B1, BSVL, SNLZK, USTRS, 18 Mc. phone
 HIAQ (band very poor and distorted)
 9ACJ, HZIF, HZIF, HZIF, HZIF, HZIF
 DLXD, DLIF, DIANAC DLBS, DMZDZDZDZ
 E4A, GFFPO, GIU, GZG, GZG, GZG
 CEUT, OETG, GZG, GZG, GZG, GZG
 10ACJ, HZIF, HZIF, HZIF, HZIF, HZIF
 URKAD VIBF, 457L, heard, D47J, DZ
 6TN, G8HF, HAKFR, SM5EC, SP8G, UABV5V
 11ACJ, HZIF, HZIF, HZIF, HZIF, HZIF
 12ACJ, HZIF, HZIF, HZIF, HZIF, HZIF
 13ACJ, HZIF, HZIF, HZIF, HZIF, HZIF
 14ACJ, HZIF, HZIF, HZIF, HZIF, HZIF
 15ACJ, HZIF, HZIF, HZIF, HZIF, HZIF
 16ACJ, HZIF, HZIF, HZIF, HZIF, HZIF
 17ACJ, HZIF, HZIF, HZIF, HZIF, HZIF
 18ACJ, HZIF, HZIF, HZIF, HZIF, HZIF
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 100ACJ, HZIF, HZIF, HZIF, HZIF, HZIF

Alan VANCE has been to Sydney and Hobart in recent weeks and met several of the locals; hence no report of activities from his home station.

Eric 28838-296 has again, this month, heard
lots and lots of good DX. 7 Mc. cv: DJJKE
DJJRE, JAJAZA, UASNDK, UBSPF, YOTDF
14 Mc phone HLKRS, VKOPZ, NNIMM, VK-
REW, VEZNN 14 Mc cv: BVUSA, BVSPPT
DUICV, FAIRJ FBEXX, FKJAW FKJAI HC-
1LE, KBBCB, JZPHH, KRUMS, KWDFD, XVJAG
KWDDG, MPJAC, VKRSH, VKQVY, TIFPZ
UJZKAA, UPMLE, VREDK, VPSEP, VSIDN
VSEPF, XZTHZ, YVIAD, YVIBJ, ZKJAR, LA-
TRFV LAISH/M, WKECP, UQJAE/MM, and

Don L360 is spending more time listening to the various bands and is of the opinion that 15 and 16 metres will not be of much use for the next four or five years.

The next good band was 40 metres. However, the 40 metre band is picking up and with the help of 80 will carry a big share of Amateur activity over the next few months.

In other countries this month—UG6, FF4 and CP1—to take his score to 218. The following have been heard—35 Mc.: w/c: OKRKA, FG7, WYV, ZL1KBA, VESP3, WJALL, DABEKKZ, DUTSV, UAOKCA, HASKRP, XGADU, UBSKCP, UGAKA, ULTIV, UVAQD, 14 Mc.: w/c: VBNNN, KXW, YB, YC, YD, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NN, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NN, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ

2TH. 16 Mc. phone. CP1BH. DUSTV. KWBL.
VUHS. 45TVL. THES. KC8CJ. OA4DT. YN-
SANK. SMINDM. VP6GV. VS1FZ. and on a.s.b.
HC1KE. 21 Mc. c.w.: DL1DX. ON4TJ. UBSAG.
DLQR. ON4RN: phone: VPPPJ. KXKDO. CR-
SAL. GF2FD. GW2CCU. OH2NW. V8CCL. Z6-
STG. 28 Mc. phone: Ws. KG6EL. KBHAG.

QSL SITUATION

Ray Jones is back home and again doing the Federal QSL job. The VKS Division of the W.I.A. has asked Eric BERS-193 to manage the Inward QSL Bureau which, for the time being, he has accepted. Thus, these Bureau chores are in very capable hands and efficient services are assured.

QSLs received during the month: BE8S-1M;
BV5HPT KM8BV UG3AG, VP9QQ, VR3KD,
VR3X, XE1PJ, YV3BD VK8ER: 83 cards which
included OD8LK, HC1JU, VS90A (Oman), ZE-
8PO, KV4CI, UT8CC, X41JL, LA8FG/P (Spitz-
bergen), VQ8CZ, U8KAD, ZB1JB, UD8EB,
ZE4JS, UN1AE, IT1AQ VK8QL CR8CV

I wish to thank Don Chesser, of Kentucky, for several news items taken from his DX magazine, also those in VK-land who sent in notes. T. John.

LOW DRIFT CRYSTALS

FOR

AMATEUR BANDS

ACCURACY 0.02% OF
STATED FREQUENCY

3.5 and 7 Mc.
Unmounted, £2/10/0
Mounted, £3/0/0

**12.5 and 14 Mc.
Fundamental Crystals,
"Low Drift,"
Mounted only, £5.**

Spot Frequency Crystals Prices on Application.

Regrinds £1/10/0

MAXWELL HOWDEN
15 CLAREMONT CRES.
CANTERBURY, E.7,
VICTORIA

NOTE

Your long-standing scribe is pleased to be back on the job once again. The overseas tour was a huge success and the rich experiences and widening of horizons will long remain in my memory, together with recollections of many fine Hams encountered on my travels.

I cannot allow this opportunity to pass without publicly thanking Eric Treblecock, BERS-198, for his spontaneous offer to "stand in" as Federal QSL Manager during my absence. The large number of eulogistic comments from world-wide sources is sufficient testimony as to the manner he performed the duties of the

Ted VKSJE visited Melbourne and Hobart as a member of the S.A. Postal Institute team journeying to the Annual Carnival held in Hobart in March.

Over the past 20 years, I have frequently lauded the artistic talents of Jose Gimenez, ESBA. His artistic embellishments to his QSLs make those cards extremely desirable. A recent bunch to hand leaves no doubts that he is and is teaming with the modern stamp

Russ VK6KK expected to bultion up in Port Moresby around early March. Recent advices indicate however that his relief will not arrive until the end of April. Russ is doubly cheered off by the fact that he had dismantled antennae and packed all his gear, prior to receiving the

—Ray Jones, VK3RJ, Federal QSL Manager.

D.X.C.C.—The Mali Federation (FFB), comprising areas previously known as Senegal and Fr. Sudan, was formed as from 20/8/60 and given separate listing in "A.R." Sept. '60. After a short period, this Federation changed to Senegal Republic and Mali Republic (formerly Fr. Sudan). Both Republics will now be given separate D.X.C.C. listing as from 20/8/60.

Kaliningrad Region (UAE, situated on the Baltic Sea between Poland and Lithuania forms part of European R.S.F.S.R. from which it is sufficiently removed to justify separate listing as outlined in "A.R.L." Oct. '60, page 26, for any post-war contacts.

Amend D.X.C.C. Countries List published in "A.B." Jan. '61, accordingly

80 Mr. W.A.S.—Congratulations to Geo. VK-5GG (ex-VK5ZGA) who has been issued Award No. 18 with the additions of Papua, New Zealand and Japan, and to Bill VK5ZAX, who has been issued No. 20 with the addition of Papua.

W.A.V.R.C.A.—Mainly as a result of recent activities in the Northern Territory, further Awards were issued during Jan.-Feb. as under

No. 148	WBLIL, Tom Taylor
" 149	W1VG, "Pete" Morrow
" 150	W8GMC, Milton Smith.
" 151	W4IMI Ken Cole
" 152	K6CQM, Bob Murphy
" 153	W8GFF, Bud Frohardt
" 154	W2TF, H G Mustermann.
" 155	W3LE, Louis Bremer

The first meeting for 1961 took place at the usual rendezvous when films by courtesy of 2RJ and 2VO were projected by the honorary of that profession, 2QX. Those present were 2CS, 2ZL, 2AJKX, 2AKB, 2AYL, 2ZWN, 2ANA, 2RJ, 2ZK, 2XT, 2AQR, and associates Sutherland, McLachlan, Foster, Gray, Finch, Bailey, Munn, Stobbs, Mullins and Finlayson. Stuart 2AYF, alias 2ZDP, was an absentee due to another-in-law trouble. Our old friend, Tom Davis, has had a troubling appendix removed and is at the moment still recuperating.

There has been some shuffling around going on at commercial station 2EO. 2ES is now the chief engineer, while Ken ZG is to be chief of the new Ly station NBN Ken's son. I believe, is starting work under the eagle eye of Harold 2AHA. Haven't heard, but was told that Jim ZEC is again active, but I did hear John 2XQ tell someone or other that his great uncle brought Wal 2AXH into this world—frankly John, I think you are same mentioned

Your official branch station 2AWX is now again in full swing and the operators for Feb. were 2CS, 2AYL and 2AQR. One broadcast night a "caller-backer" gave 2CS the report that he was the best signal on the band—of course the reporter, 2NA, is only a newcomer—anyway, Lionel didn't come back, he appar-

The lifting of the foreign language importation ban had left **EZL** happy in his contact quest. He had risen chiefly because the Americans were frightened to work one with such an accent. During the month **Lew ZAWS** called on **EZL** as also did **2AMA**, however **Clem** doesn't think much of **Bill's** geography and no doubt will stick to a map in future. **Lew** did the R.I. act as a guide with the result. No doubt we have all heard how **Bill** is conquering his t.v. troubles—he invites as many mobsters around then walks up and down his lane so that his irate neighbours can see that it is

Ernie 2PF is home again after quite an op. They had to take at least 34 stitches out of his back. He is now at Klor's. Charlie 2ARV is in bed with a broken leg, apparently he plays bridge. Cripes, if I got one of those they would shoot me as I work and eat like a horse. Geoff 2YU is still looking for Newcastle boys on 146--on that frequency. The 2YU's are monitoring on Monday nights and reports back 2A's. The 2YU's are chiefly from Max 2ZMO and lan 2ZIF. No your Secretary, Gordon, and myself did not win the lottery, it was only a five. Congrats to the working-bee of two the other Saturday at Aitchison Street--of course there were others.

Next Branch meeting will be on April 14 at the University of N.B.W., Tighes Hill, and SXT's social as usual will be the fourth Wednesday, 24th—24OR.

VICTORIA

EASTERN ZONE
Now that everybody is getting back down to earth after the Xmas holidays, activity is on the increase throughout the Zone. Stan 3ZAB has now moved his shack outside. Cliff 3AIT has now the a.c. power on, and is building up power supplies. David has been very active down on 10 and 20 mx, as well as joining in the 3 mx bi-weekly nets with 3ZDP, 3ZAQ, and 3ZCG—where is the rest

Peter 1ZDP and George 1ZCG both have been working the Ez DX on 6 mm. George 1ZCG also runs skeds with Melbourne stations every

Have been pleased to hear of two new Home in this Zone. One who has been in Amateur Radio for some time is Murray ZAMP, and he is now residing in Warracknabeal. Murray is not on the air yet but is about to hear his well modulated signal in the near future. The other is Neville Maddern, who has just been allotted his call sign of 3AAQ. Neville's home town is Jung (near Horsham), but at present he is employed on one of the large broadcasting stations near Bendigo.

Vic 3AEQ, of Murtoa, is now on the air with his new rig, sounds very nice too. Local boys have been contacting Chas. VB1B at regular

MOORABBIN AND DISTRICT RADIO CLUB
On Sunday, March 12, members journeyed to Mt. Dandenong and were shown over the transmitting stations of HSV7 and GTV9. The visit proved very enjoyable and the hospitality of Peter JAWA of HSV7, and Mr. J. Young of GTV9 was much appreciated by members.

Our Crazy Whist nights are proving very successful, as are the Barbeques. On Friday evening, 7th April, at 8 p.m., we conduct our first 80 mhz Transmitter Hunt for the year. Operating on 3527 Kc, on that evening, a c.w. signal will be heard signing "V V V VK3APC". This is our automatic sender, and you will not be able to contact him.

On Monday evening, 16th April, by the courtesy of Mr Cecil Beaurepaire, we visit Olympic Tyre and Rubber Co works. We are looking forward to a very enjoyable evening because, after viewing some movies and then being shown over the factory, we are being entertained to supper.

In all, the Club is steadily progressing, and the theory class should be terminating very shortly. Sixteen members are still enthusiastic. —H.C.

UNENSLA

February being a very poor month for the Amateur bands. It was very hard to give any news. Although quite a large number hold an Amateur license in Townsville, as the Call Book shows, there does not seem to be the activity of a few years ago. Just cannot say why, even though the bands are not in evidence. 40D and 4XL can be heard almost every night on 36 Mc. talking about their pet projects. In fact seem to have this band in the 30 Mc. range. Heard them go through 3X10 after a session with Len a few nights ago. Went to 31 Mc. and heard an opening, and promptly went on c.w. to work many Europeans; frequent monitoring of his QSOs did not show

Bob 4CR is disposing of his gear and hopes to leave shortly for VKs to become a disciple of the "one eyed brethren." Claude 4UX brought up the gang from Ayr to the last meeting of the local radio club and had he not done so, the meeting would have been a fiasco. Apparently the locals are just too tired to come along, just pay their dues and never

The local Z boys are not as active on the 50 Mc. band because of conditions, so it is to be hoped the band soon opens, either north to Japan or south to the other VKs, and let us hope some activity.

Now that a small wet season has arrived everyone hopes the noise level will abate and allow us to work the chaps with the weak signals below 88. Cannot remember the noise level being so fierce in the past. When are the commercials going to vacate the 14 and 21 Mc. bands? In fact they seem to be on the

An article in the local press of Feb. 21, 1934, created a large interest to the readers, and in consequence many queries were received. We cannot leave it here. It was an "Associated Press" release, dated New York, Feb. 20, "Short-Range Two-Way Radio Boom," referring to the Citizen Band in U.S.A. and the 22 channels. It is in use on 27 Mc. The article pointed out that the Government has issued 174,000 licenses for the use of the Citizens Band in the past two years and now getting applications of 10,000 per month. It is granted here, we could not hope for these figures, but think of the tremendous boost it would give to the commercial manufacturers of radios in building these sets and help them in the building of the radio.

Stan ASA's article in Feb. "A.B." on his "Pilgrimage for Progress" in Queensland is very timely and it is noted with regret that Townsville, the largest city in the north, does not have a public meeting and a non-aligned group with WICEN committees formed in other towns. See that Rockhampton meeting was called by the Mayor and held in the Town Hall. After reading the article, I was reminded of the popular pop tune, "Hang down

Don 4PW, note that Jim 4ZO has new gear and available if required to follow in your footsteps if the bad winds and floods trouble the district. 73. 4RW

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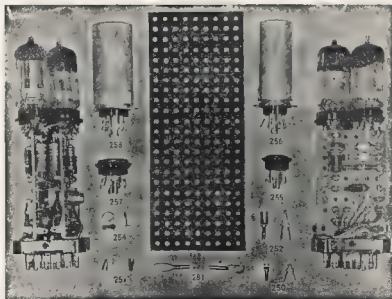
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SOUTH AUSTRALIA

The month of February saw in VK5 the holding of the Annual General Meeting, together with the usual monthly general meeting, all on the one night in the club rooms. A very responsive and large audience of members was present. As before, and I will say again, and nobody has a chance to stop me, that anybody who turns up to a general meeting in the annual meeting, being all held on the one night, should have their bumps read. However, the VK5 meetings of this nature have, throughout the passing years, come to mean good entertainment, plenty of laughs, rude and coarse interjections, to say nothing of the revealing of past history of all who stand up on the floor to have their say, by their opponents. This year to add to the general enthusiasm of the membership, the Council added several new angles to the meeting, which to say the least, were a huge success.

Firstly, they fixed it so that the public address went on the blink and nobody could hear a word that was said, then they pushed the business on with a rapid-fire, changing the motions to amendments, then back to motions and back to amendments of the motions, until the Irish noble knew what was what, or who was who. I for one was completely befuddled, and once found myself seconding a motion, and then I was asked to move it, to second it for Johnny SKO. This ailed everybody fine, and after my somewhat weak explanation was heard in noisy silence, pen-enclosed, broken, and soon, and I was the truth about myself in no uncertain manner from all directions.

It was announced by the Chairman, Lloyd SKOK, that over to the circumference beyond Council's control, or perhaps it was muggles on the line, that only seven members were wanted for Council, and not nine as originally intended, and the opinion being stated that it would be OK to carry on. This was tossed about by everyone for about a half an hour and then became a matter of the amendment, which was the original motion, or something, and the voting was checked by the two scrutineers, Jim SKK and Bruce SRO. The result was: Brian SKK, Joe SKK, John SKK, Len SKK (an ex-VK3), Rex SKO, Keith SKH, and Phil BNN—and if I might say so, a very good Council indeed.

The Secretary and Treasurer were then asked to retire from the meeting whilst the question of honorarium was discussed. This matter took quite a time, due to everybody wanting to show that the honorarium was of the utmost importance, by increasing the honorarium to astronomical figures. The matter was at last satisfactorily settled, and after considerable delay and the Treasurer was finally located and forcibly dragged back, to face what they by now thought was a hostile meeting, only to be overhauled at the generosity of the members. Rumour has it that they were finally discovered at the shop opposite the meeting rooms, quaffing bottles of coke and tipping the streamer, and the general counting honorarium. Mind you, you all know what a tickle jade rumour can be!

Moving from the annual meeting to the general meeting did not take long, and a few minutes later, the meeting was open to those engaged in them, and then Brian SKA stole what was to have been my thunder and proposed the vote of thanks to the VK5 President, Lloyd SKOK, who unfortunately could not see his way to serve for his second year. The members showed their appreciation in no uncertain manner, and Lloyd, his voice shining with suppressed emotion and tenseness, thanked them from the bottom of his heart. I knew, I know, but it looks good doesn't it?

A couple of more skirmishes occurred in the meeting, and then at the twelve o'clock hour of 11.15 p.m., although the lights in the hall did not go out until nearly midnight. Every-

one had a rattling good time. Tubby SNO was bobbing up and down all night like a cork with motions and amendments galore, and apparently thoroughly enjoyed himself, and to conclude this very short description of the meetings, I can only say that everybody echoed the sentiments of one of the hysterical members who stated that it was a pity that annual general meetings only came once a year.

No visitors' book was produced, and therefore I cannot tell who were visitors and who were not. However, I can assure you that two notable visitors were confusion and bedlam, and can assure you that everybody who got to their feet and had their say, were roundly insulted and then sat down, because after all, everybody who has paid the necessary fees is entitled to have their say and express their enthusiasm for their Division.

It would appear from my personal observations that if one cares to rise on Sunday mornings at the ungodly hour of 8 a.m., one will be rewarded with the regular contact between Rex SKO and one of the wise men from the East. The topics that they discuss in this QSO are many and varied, and I had had me in tears as he described his falling eyesight the other morning. I checked over my spare white sticks and guide dogs with the idea of being of some help to the poor old chap, when I realised that he was somewhat exaggerating and after a couple of stiff glasses of water I resigned my services.

Heard Lance SKL and Wally SDF in QSO the other Sunday morning before the W.I.A. session, and have never heard such strong signals from them before. Strangely enough some ten minutes later, I heard Wally SDF noticeably in strength and by the time the session had started they were back to their usual signal strength. I just had to shut my eyes.

Brian SKCC just back from Wilkes was heard from the shack of Joe SKO recently, and was heard talking to Lance SKD about his sojourn in Wilkes. We amused us to hear him say when he got tired of human company he always had the hussies to talk to. I could have used a couple of hussies about the annual general meeting! I might mention that he had pushed his bike from Henley Beach up to Joe's to hear the W.I.A. session, and he is still as keen as ever to go, by now, and please Brian, always remember those classical words, "DX before Dish!"

Dave SD5, Doctor Mac to you, was heard on 7 Mc. the other Sunday morning. This is a usual good signal and cheery personality. This joker has the biggest following among the gentler sex who listen in from the kitchen to their better halves' conversations. Why? Well, they lap him up, especially when he says with that broad Scotch accent of his, "Well, OM, will cross to you for a wee small sporrin' Nobody can't mother me, more likely want to smother me."

Tom STL has deserted me completely these days but as I heard Keith SKH say that Tom is about to take his annual two years' leave, I suppose I will have to forgive him. Lionel SLB also heard on 7 Mc. the other Sunday, and although I said with a certain reluctance. The last time that I said I had heard him on 21 Mc. I was subjected to derision and insults, much to my regret, since I was using the wavemeter, the oscilloscope, the t.v. set, and even rang up Somerton frequency measuring station as a further proof. So, I again heard Lionel SLB on 7 Mc. the other Sunday. Now get out of that one!

Bumped into Lance SKL and his charming XYL the other afternoon as I was holding up a shop window that some chap asked me to do until he returned. His XYL used to be one of my keenest readers some time ago, but as she did not allude to my humble efforts in any way this time, I can only conclude she has lost it cunning and my Bon Mots fail on barren ground.

This paragraph will take some believing, but going on my unblemished record for telling the truth and never, never attempting to exaggerate, I will now suitably introduce the subject to a loud waving of the hand for a forty-two gun salute, a fanfare by forty-one heralds, and frenzied cheers from the population of Lucindale, the unofficial mayor of that thriving country town in the River Victor, into the spotlight, and unfurling his banner, states in a voice that can be heard as far as Mount Gambier, "OVER THE TOP OF THE DIXIE DORRERY STATE THAT I HAVE NO GRIZZLES. I think the VK5 Division is tops and without doubt the W.I.A. session has no superior!" As true as true, so help me, Wally SDF. Because the appeal over the W.I.A. session for a xtal suitable for Arch to enter the Field Day Contest brought forth such a response that he is thrilled

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VK12VW	19	VK12LL	14
VK12VW	19	VK12ML	14
VK12VW	19	VK12NL	14
VK12VW	19	VK12OL	14
VK12VW	19	VK12PL	14
VK12VW	19	VK12QL	14
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